

AMENDMENTS TO THE SPECIFICATION

Please replace the ~~paragraph~~ beginning on page 1, line 17, with the following amended paragraph:

A Several smaller facilities may be set up rather than one larger facility depending on the relative location and parts used by the customers in order to better service the various customers' needs. Factors such as distance to the customers, transportation costs, holding or storage costs, criticality of the customer's needs and others may be taken into account when deciding where to locate such facilities. Hierarchical levels of facilities are typically established with the higher levels ~~supplying~~ supplying parts to the smaller, more locally situated facilities.

Please replace the paragraph beginning on page 3, line 1, with the following amended paragraph:

A2 The method of Caveney then allows for entry of an inventory investment constraint. A ~~processer~~ processor determines the expected number of fillable orders from stock and the slope for each part service level for each part. The ~~processer~~ processor may also determine the MURQ and SUQ for each part. An optimization routine therefore provides an optimum service level for a specified inventory investment constraint. Alternatively an optimized inventory investment level may be determined for a specified inventory service level constraint.

Please replace the ~~paragraph~~ beginning on page 8, line 1, with the following amended paragraph:

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In FIGs. 1a and 1b there is shown a customer 14 having a demand for a part. The customer is depicted as a personal computer in FIGs. 1a and 1b but the customer's demand may arise for any reason. For example a repair part may be needed to replace a failed part in a piece of machinery or office equipment such as the personal computer of FIGs. 1a and 1b. A part may also be needed due to normal or abnormal wear-out mechanisms. A customer 14 may have one or many pieces of equipment installed or operating at his location. Parts to satisfy the demand of customer 14 are supplied by a ~~nearly~~ nearby part facility 12. Facility 12 is designated as the primary location for customer 14. Other part facilities 16 may be located further away from customer 14, however as shown in FIGs. 1a and 1b, there are four other part facilities 16 located within a pre-specified, e.g. two hour travel time of primary location 12. Other part facilities 16 normally serve as a primary location for other customers (not shown). Boundary 18 defines the outer limit of all possible geographic locations within a pre-specified travel time of primary location 12. The region within boundary 18 is referred to herein as a neighborhood 10 of primary location 12. In FIG. 1a the neighborhood is a 2 hour neighborhood.

Please ~~replace~~ the paragraph beginning on page 13, line 25, with the following amended paragraph:

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The mathematical model may comprise a mixed integer problem. The main variables in this mixed integer problem represent the stocking levels for each ~~parts~~ part at each stocking location. These decision variables are required to take non-negative integer values. Flow variables are introduced to represent transportation of parts between stocking locations. Flow variables are required to be non-negative, but because these

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represent average flow rates, the rates may take non-integer values. Other problem formulations and approximations known in the optimization arts may be used. For example in businesses where large quantities of relatively low cost parts are used, it may be an acceptable approximation to allow non-integer stocking levels during problem formulation and solution, but round the optimum stocking levels to the next higher or next lower integer value. In such cases the mathematical model may comprise a linear programming problem, non-linear programming problem, or other type of optimization problem.
